

YEVGRAFOV, M. A.

Let $p(s) = 1 + a_1 s + \cdots + a_k s^k = \sum_{i=1}^k (1 - s\lambda_i^{-1}).$ $|\lambda_1| < |\lambda_2| < \cdots < |\lambda_k|, \quad a_j \neq 0.$

(Russian)

Mathematical Reviews May 1954 Analysis

The author investigates the closure of (x*paxx) in the set of functions regular in |z| < r. Here $p_n(z)$ is a polynomial of degree k with non-vanishing coefficients, and $p_{\bullet}(z) \rightarrow p(z)$ as $n \rightarrow \infty$. It is shown that associated with every λ_i there is a power series $F_i(z) = \sum c_i(n)z^{-n-1}$, convergent in $|z| > |\lambda_i|$, such that the linear functional $l_j(f(z)) = \int F_j(z)f(z)dz$ (integration along $|z| = |\lambda_j| + \epsilon$) vanishes for $f(z) = z^n \rho_n(z)$. Theorem. Let f(z) be regular in z < r, $l_1(f) = \cdots = l_{m-1}(f) = 0$, $l_m(f) \ne 0$, and $l_{m-1}(f) = 0$, then there is a convergent expansion $f(z) = \sum_{n=0}^{\infty} b_n z^n \rho_n(z)$ $z < \lambda_{m(j)}$. If $I_{j}(f) = 0$ for all j with $|\lambda_{j}| < r$, then the expansion converges in |s| <r. W. H. J. Fuchs.

Evgrafov, M. A. On completeness of certain systems of polynomials. Mat. Shornik N S 33 75 . 133-440 (1953).

USSR/Nathematics - Interpolation FD-1407 Card 1/1 : Pub. 47 - 4/6 Author : Yevgrafov, M. A. Title : A recursive relation connected with the Abel-Goncharov interpolation problem Periodical : Izv. AN SSSR, Ser. mat., Vol 18, 449-460, Sep-Oct 1954 Abstract The article derives a new recursive relation which makes it possible in several cases to give completely accurate evaluations for interpolation polynomials, mostly from below. Eight theorems and five lemmas are proved in the demonstration. The article was presented by Academician S. L. Sobolev.

Institution :

Submitted : July 1, 1953

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YEVGRAFOV, Marat Andreyevich

(Moscow Physico-technical Inst) Academic degree of Doctor of Physico-mathematical Sciences, based on his defense, 28 June 1955, in the Council of the Moscow Order of Lenin and Order of Labor Red Banner State U imeni Lomonosov, of his dissertation entitled: "Method of related systems in the fields of analytical functions and its applications to interpolation."

Academic degree and/or title: Doctor of Sciences

SO: Decisions of VAK, List no. 24, 26 Nov 55, Byulleten' MVO SSSR, No. 20, Oct 57, Moscow, pp 22-24, Uncl. JPRS/NY-471

(1953=195h) The Strollem for modes located on a to show the conditions under which the where P_n is the function P(z). The P_n P(z) = APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001963010009-2"

EVGRAFOV, M-A CARD 1/2 USSR/MATHEMATICS/Functional analysis SUBJECT EVGRAFOV M.A. The spectral theory of certain operators in the space of AUTHOR TITLE analytic functions. Doklady Akad. Nauk 105, 625-627 (1955) PERIODICAL reviewed 7/1956 In connection with his earlier paper (Doklady Akad. Nauk 101, No.4 (1955)) the author tries to establish a spectral theory for the operators A(F): $A(F) = \frac{1}{2\pi i} \int_{|\zeta| = r} k(z, \zeta) F(\zeta) d\zeta, \quad k(z, \zeta) = \sum_{n=0}^{\infty} \frac{\lambda_n z^n}{\zeta^{n+1}} + \sum_{n=0}^{\infty} \sum_{k=1}^{\infty} \epsilon_{n,k} \frac{z^{k+n}}{\zeta^{n+1}}$ $\lim_{n\to\infty}\sum_{k=0}^{\infty}\epsilon_{n,k}r^{k-n}=0, \qquad 1-\gamma < r < 1,$ where for simplicity all λ_n are assumed to be different. Some theorems are proved: 1. If the $a_m^{(n)}$, m=0,1,... satisfy the condition $(\lambda_n - \lambda_{n+m}) a_m^{(n)} = \sum_{k=0}^{m-1} \epsilon_{n+k,m-k} a_k^{(n)} \qquad a_0^{(n)} = 1,$

then the functions $\varphi_n(z) = z^n \sum_{m=0}^{\infty} a_m^{(n)} z^m$ satisfy the equation

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Doklady Akad. Nauk 105, 625-627 (1955)

CARD 2/2

 $\lambda_n \varphi_n(z) = \frac{1}{2\pi i} \int_{|\zeta|=r} k(z,\zeta) \varphi_n(\zeta) d\zeta$ 2. If the $b_m^{(n)}$, m=0.1,...n satisfy the condition

$$(\lambda_n - \lambda_{n-m})b_m^{(n)} = \sum_{k=0}^{m-1} \xi_{n-k-1,k+1}b_k^{(n)}$$
 $b_0^{(n)} = 1,$

then the functions

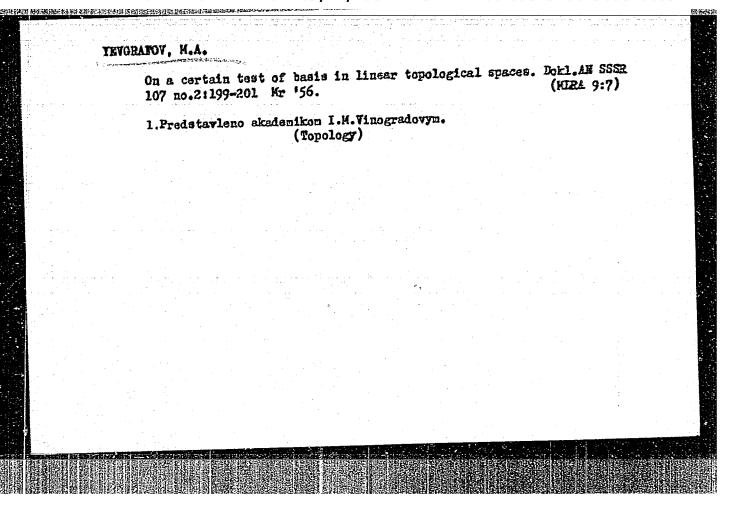
$$\Psi_n(\zeta) = \sum_{m=0}^n \frac{b_m(n)}{\zeta^{n-m+1}}$$

satisfy the equation

$$\lambda_n \psi_n(\zeta) = \frac{1}{2\pi i} \int k(z,\zeta) \psi_n(z) dz$$

3. The systems of functions $\{\Psi_n(z)\}$ and $\{\Psi_n(\zeta)\}$ are biorthogonal.

Furthermore it is proved that under certain further conditions the system of functions $\{\varphi_n(z)\}$ forms the basis in the space O(|z| < r), r < 1 and the system $\{\psi_n(z)\}$ forms the basis in the space $\Re(151 > r)$, r<1.



CIA-RDP86-00513R001963010009-2 "APPROVED FOR RELEASE: 09/17/2001

YEVGRAFOY, M.A.

Subject

PG - 380 USSR/MATHEMATICS/Functional analysis CARD 1/2

EVGRAFOY M.A.

AUTHOR TITLE

The completeness of a system of eigenfunctions of a certain class of operators in the linear topological space with a non-

countable basis.

PERIODICAL

Doklady Akad. Nauk 108, 13-15 (1956)

reviewed 11/1956

Let the linear topological space Ol(G(r)) consist of the functions f(x)defined on $(0,\infty)$ which satisfy the condition $\int |f(x)| e^{-xr} dx = e^{0(\sigma(r))}$. topology is given by the notion of convergence $f_N \to 0$ if $\int |f_N(x)| e^{-ix} dx \le \delta e^{-1}$ $\xi \in \mathbb{F}_N^e$, $\xi_N \to 0$, $\xi_N \to 0$. Here for $r \to 0$, $\xi(r)$ tends quicker to infinity than $\ln \frac{1}{r}$ and f(x) has no worse singularities than the δ -function. In $\mathcal{O}(\sigma(\mathbf{r}))$ the operators $A(F(x)) = g(x)F(x) + \int_{-\infty}^{K} \xi_{\lambda}(x)F(\lambda)d\lambda$ and $A^*(F(x)) = g(x)F(x) + \int E_x(\lambda)F(\lambda)d\lambda$ are considered. g(x) is assumed to be continuously differentiable, besides $g'(x)\neq 0$ and $g(x_1)\neq g(x_2)$ if $x_1\neq x_2$. For

Doklady Akad. Nauk 108, 13-15 (1956)

CARD 2/2

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these operators several spectral theoretical results are formulated without proof: 1. If $\mathcal{E}_{\lambda}(x)$ satisfies certain conditions, then in O(5(x)) for an arbitrary M>0 there exists a single function $\mathcal{V}_{\mu}(x)=\delta(x-\mu)+a_{\mu}(x)$; $a_{\mu}(x)=0$, $x<\mu$, which satisfies the equation $A(\mathcal{V}_{\mu}(x))=Q(\mu)\mathcal{V}_{\mu}(x)$; likewise there exists a single function $\mathcal{V}_{\mu}(x)=\delta(x-\mu)+b_{\mu}(x)$; $b_{\mu}(x)=0$, $x>\mu$ which satisfies the equation $A(\mathcal{V}_{\mu}(x))-Q(\mu)\mathcal{V}_{\mu}(x)$. 2. The systems of functions $\{\mathcal{V}_{\mu}(x)\}$ and $\{\mathcal{V}_{\mu}(x)\}$ are biorthogonal:

 $\int_{\gamma} \varphi_{\mu}(x) \cdot \psi_{\gamma}(x) dx = \delta(\mu - \nu).$

3. For the functions $a_{\mu}(x)$ and $b_{\mu}(x)$ estimations are given. 4. If these estimations satisfy certain conditions, then the system $\{\psi_{\mu}(x)\}$ forms a basis in O(6(r)).

The formulated results are extensions of the author's theorems 1.-4. in Doklady Akad. Nauk 105, 625-627 (1956) to the case of a non-countable basis.

INSTITUTION: Phyro-technical Institute, Moscow.

Call Nr: AF 1135661

AUTHOR:

Yevgrafov, M. A.

TITLE:

Asymptotic Evaluations and Entire Functions (Asimptoti-

cheskiye otsenki i tselyye funktsii)

PUB. DATA:

Gosudarstvennoye izdatel stvo tekhniko- teoreticheskoy

literatury, Noscow, 1957, 158 pp., 4,000 copies

ORIG. AGENCY: None

EDITORS:

Solov'yev, A. D. and Tikhonova, E. P.; Tech. Ed.:

Murasheva, N. Ya.; Reviewer: Bakulova, A. S.

PURPOSE:

The book is a monograph concerning asymptotic evaluations.

It is not designed as a textbook.

COVERAGE:

Most asymptotic evaluations are derived using special properties of a problem. The author believes that it is better to use available general methods which must first

be classified and generalized. He does not expect to

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solve all problems using general methods, but thinks

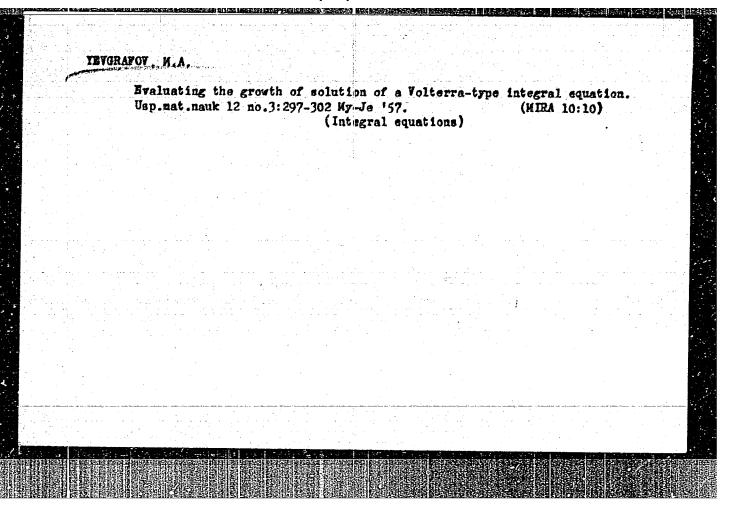
Asymptotic Evaluations and Entire Functions (Cont.) Call Nr: AF 1135661

many of them could be solved more simply and more completely. The book consists of three chapters. The author takes four examples and shows how asymptotic evaluations of the functions are obtained the thus introduces the concepts of asymptotic evaluation and of asymptotic series. After this introduction, he gives four methods for asymptotic evaluation indicated in the Table of Contents. Each method deals with a certain type of function. Formulas for asymptotic evaluation are derived and the application of the formulas.for some problems is given. Special consideration is paid to the method of Laplace and the method of steepest descent, which in the author's opinion can be widely applied. The asymptotic evaluation of entire functions, or of functions which can be expressed in terms of entire functions, are needed in many problems of analysis. The author gives the fundamentals of the theory of entire functions in connection with asymptotic evaluation in chapter two. He investigates the relationship between the behavior of entire functions in infinity and the basic elements of the entire function. The author investigates special cases of asymptotic evaluation of entire functions. He takes certain important examples and using the general methods given in chapter one, the theory of entire

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functions given in chapter two and some additional formulas, asymptotic evaluations of functions. The book deals with Ruscontributions. There are 8 references of which 7 are in Russian mentioned include Lavrentyev, M. A., Shabat, B. V., Levin, B. ard Markushevich, A. T.	sian
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Yev-rate for, M.A.

SUBJECT. USSR/MATHEMATICS/Functional analysis 22RD 1/4 PC = 909
AUTHOR EVERAFOR M.A.

Ilinear operators in the space of analytic functions of several variables.

FERIODICAL Izvestija Akad. Nauk 21, 223-234 (1957)

The space O_R^k (O_R^k) is the set of analytic functions of the k variables $z_1, z_2, ..., z_k$ which are regular for $|z_i| < 2$ ($|z_i| > R$), i=1,2,...,k. The convergence is understood as a uniform convergence. In O_R^k and O_R^k the basis and biorthogonality are defined usually. We denote $F(z_1, ..., z_k) = F(z)$; $z_1^{m_1}, ..., z_k^{m_k} = z^m$ etc. Linear operators in O_R^k and O_R^k are defined by the functions $\varphi_m(z) = Az^m$, $m_i = 0, 1, ..., i=1, 2, ..., k$ or $\psi_m(z) = Bz^{-m-1}$, $m_i = 0, 1, 2, ..., i=1, 2, ..., k$. If the linear operator A is defined in O_R^k by $Az^m = \psi_m(z) = \sum_{n=0}^{\infty} a_{m,n} z^n$, then the operator defined by $A^{i}z^{-m-1} = \psi_m(z) = \sum_{n=0}^{\infty} a_{n,n} z^{-n-1}$

Izvestija Akad. Nauk 21, 223-234 (1957)

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in \overline{Ol}_R^k is denoted with A'. If A transfers the space Ol_R^k into Ol_R^k , $R_0 \le R \le R_1$, then the representation holds:

$$AF = \frac{1}{(2\pi i)^k} \int \dots \int_{|\zeta_i| = r} A(z_i \zeta) F(\zeta) d\zeta_1 \dots d\zeta_k,$$

where A(z₁ \leq) is an analytic function of z and \leq which is regular for $|z_i| < r$, $|S_i| > r$, $R_o < r \le R_1$. If A transfers O(R) into O(R), then A' transfers O(R) into O(R) into O(R) ($R_o < R \le R_1$) and

$$\frac{A^{1}F - \frac{1}{(2\pi 1)^{k}} \int ... \int A(\zeta,z)F(\zeta)d\zeta_{1}...d\zeta_{k}}{|\zeta_{i}| = r}$$

If O has an inverse operator in O_R^k and the system $\left\{ \varphi_m(z) \right\}$ forms a basis in O_R^k , then also $\left\{ \varphi_m^{(1)}(z) \right\}$, $\varphi_m^i = A \varphi_m$ forms a basis in O_R^k .

Izvestija Akad. Nauk 21, 223-234 (1957)

CARD 3/4

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Let A be an operator in $\Omega_{\rm R}^{\rm k}$: Az = $\varphi_{\rm m}(z)$ = $\sum_{\rm n=0}^{\infty} \xi_{\rm m,n} z^{\rm n}$ and let exist a

$$\sup_{\alpha \leqslant r \leqslant 1} \lim_{m \bowtie x} \sum_{i=0}^{\infty} |\varepsilon_{m,n}| r^{n_1 + \cdots + n_k - n_i - \cdots - n_k} = \varepsilon_1.$$

Then for the operator equation $(L+\lambda E)F = G$ for $|\lambda| > E_1$ all Fredholm theorems are valid.

Let F be a solution of (E-A)F = G,

$$f(z) = \sum_{m=0}^{\infty} a_m z^m$$
, $G(z) = \sum_{m=0}^{\infty} b_m z^m$

and let

$$g_{o}(\mathbf{r}) = \sum_{m=0}^{\infty} \left| b_{m} \right| \mathbf{r}^{m_{1} + \cdots + m_{k}}, \quad \chi_{p}(\mathbf{r}) = \sup_{m \in \mathbf{x}} \sum_{m_{i} \geqslant p} \sum_{n \geqslant m} \left| \mathcal{E}_{m, n} \right| \mathbf{r}^{n_{1} + \cdots + n_{k} - m_{1} - \cdots - m_{k}}.$$

Izvestija Akad. Nauk 21, 223-234 (1957) CARD 4/4 PG - 909

Then the estimation

$$\sum_{m=0}^{\infty} \left| a_{m} \right| r^{m_{1} + \cdots + m_{k}} \leq g_{0}(r) \left\{ 1 + \chi_{1}(r) + \chi_{1}(r) \chi_{2}(r) + \cdots \right\}$$

is valid.

The operator A which satisfies the condition

$$Az^{m} = \varphi_{m}(z) = \sum_{n \geq m} \varepsilon_{m,n} z^{n}$$

is called an operator of Volterra's type. Finally the author gives a spectral theory for operators which differ from a diagonal operator only by an operator of Volterra's type. The present paper in essential is a generalization of the author's results (Doklady Akad.Nauk 101, 597-600 (1955); ibid. 105, 625-627 (1955)) to the case of analytic functions of several variables.

Decreased transferred and the contract of the

AUTHOR YEVGRAFOV M.A., SOLOV YEV A.D. PA - 3123 · Liti . On A General Basis Criterion. (Ob odnom obshchem kriterii bazisa -Russian) PERIODICAL Doklady Akademii Nauk SSSR, 1957, Vol 113, Nr 3, pp 493-496 (U.S.S.R.) Received 6/1957 Reviewed 7/1957 ABSTRACT The system of the regular functions within the domain G $u_n(z) = z^n \varphi_n(z)$, $\varphi_n(0) = 1$, n = 0,1,2,... is assumed to form a basis in the domain order each functions that is regular in G_2 in this domain is remarkable. presented by the convergent series presented by the convergent series $f(z) = \frac{z}{n}$ a u(z). This representation, by the way, is unique. The present paper contains three theorems and their proofs: Theorem 1: Be it that the system given above is assumed, where the functions $q_n(z)$ within the circle |z| < R are supposed to be regular and different from zero. The above system is written down in the form $u_n(z)=z^n-\lambda_n(z)$ where the functions $\lambda_n(z)$ in the circle |z| < R are regular. The author introduce the following denotations: $\lambda_{n}(z) - \lambda_{n-1}(z) = \Delta_{n}(z) = \sum_{k=1}^{\infty} \Delta_{nk} z^{k}, \Delta_{0}(z) = \lambda_{0}(z)$ $\Delta_{n}^{0}(\mathbf{r}) = \sum_{k=1}^{\infty} i \Delta_{nk} i \mathbf{r}^{k}$, $\mathbf{1}_{n}(\mathbf{r}) = \sum_{k=0}^{\infty} \Delta_{k}^{0}(\mathbf{r})$. If the functions $\lambda_{n}(z)$ satisfy the Card 1/2 conditions $\lim_{n\to\infty} (1_n(r)/n)$ in the case of any r< R, the system written down

On A General Basis_Criterion.

above forms a basis in the circle |z| < R. Two corollaries are added to this theorem. Theorem 2: Be it that the system $u_n(z) = u^n(z) \psi_n(z)$, $\psi_n(0) = 1$, n = 0, l.s. is assumed where $u(z) = z + \ldots$ in the simple continuous domain G is a regular and single-leaf function. The function u(z) is represented by the function u(f) on a circle with the origin as center. In the domain G the function $\psi_n(z)$ are regular and in each closed amount ECG only a finite number of these functions is assumed to have zeros. The authors here put

 $1_{n}(E) = \sum_{k=k_{0}}^{n} \max_{z \in E} 1_{n} \left[\frac{V_{k-1}(z)}{V_{t}(z)} \right]$ (E < G) is a closed amount and $k_0 = k_0(E)$ applies.

If at any $E \subset G$ $\lim_{n \to \infty} (1_n(E)/n) = 0$ applies, the system $u_n(z) = u^n(z) \psi_n(z)$, $\psi_n(0) = 0$

1, n=0,1,... forms a basis in the domain G. Theorem 3: follows from the theorem 1 by the replacement of the conditions contained there in by others. (No illustrations)

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20-114-6-4/54

AUTHORS:

Yevgrafov, M. A., Solov'yev, A. D.

TITLE:

A Class of Reversible Operators in a Ring of Analytical Functions (Ob odnom klasse obratimykh operatorov v kol'tse analiticheskikh funktsiy)

PERIODICAL:

Doklady Akademii Nauk SSSR,1957, Vol. 114, Nr 6, pp. 1153-1154(USSR)

ABSTRACT:

 $K_m(r_i, R_i) = K_m$ here designates a ring of analytical functions of the complex variables $z_1, z_2, \ldots z_m$, which are regular and unique in the case of $r_i < |z_i| < R_i$, $i = 1, 2, \ldots m$. In this ring the topology is assumed by the concept of convergence as a uniform convergence in the case of $r_i(1+\mathcal{E}) < |z_i| < R_i(1-\mathcal{E})$ for any values $\mathcal{E} > 0$. Like in the case of some papers by these authors the following can be shown: If K is only considered as a linear topological

space, the following applies:

Card 1/3

Theorem 1: A is a linear operator in K_m which is defined by the equations

A Class of Reversible Operators in a Ring of Analyitical Functions

 $Az_1^{n_1} \dots z_m^{n_m} = z_1^{n_1} \dots z_m^{n_m} \in n_1 \dots n_m (z_1 \dots z_m),$

 $-\infty < n_1, \dots n_m < \infty$ In this case $\epsilon_{n_1} \dots n_m (z_1, \dots z_m) \rightarrow 0$ at

max $|n_i| \to \infty$ (in the sense of topology K_m) holds good.

The operator $E + \lambda$ A then has an inverse operator which is constant in K_m and which has no limit points for all λ (with

the exception of a countable quantity of eigenvalues) within a finite part of the plane. In this connection the multiple quality of every eigenvalue is finite and with a suitable definition of the operator all of Fredholm's alternatives apply.

Theorem 2: gives an immaterial generalization of this result. If K is not considered a linear topological space but a

topological ring, a considerably more marked result may be obtained. There are 3 references, 3 of which are Slavic.

Card 2/3

20-114-6-4/54

A Class of Reversible Operators in a Ring of Analytical Functions

ASSOCIATION: Department for Applied Mathematics of the Mathematical In-

stitute imeni V. A. Steklov of the AS USSR

(Otdeleniye prikladnoy matematiki Matematicheskogo instituta

im. V. A. Steklova Akademii nauk SSSR)

PRESENTED:

January 18, 1957, by M. V. Keldysh, Member of the Academy

SUBMITTED:

January 17, 1957

Card 3/3

AUTHOR: SOV/20-121-1-6/55 On the Asymptotic Behavior of the Solutions of Difference Equations TITLE: (Ob asimptoticheskom povedenii resheniy raznostnykh uravneniy) PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 121, Nr 1, pp 26-29 (USSR) ABSTRACT: Let the coefficients of the equation $y(n+k) + \sum_{m=1}^{\infty} a_m(n)y(n+k-m) = 0$ satisfy the conditions: $a_k(n) \neq 0$, $n \ge 1$; $\lim_{n \to \infty} a_m(n) = a_m$, $\sum_{m=1}^{\infty} |a_m(n+1) - a_m(n)| < \infty$ $\lambda^{k} + a_1 \lambda^{k-1} + \dots + a_k = (\lambda - \lambda_1) \cdot \dots \cdot (\lambda - \lambda_k), \quad \lambda_i \neq \lambda_j, \quad \lambda_i \neq 0$ (i, j=1, 2, ..., k).Let $P_n(\lambda) = \lambda^k + a_1(n) \lambda^{k-1} + \dots + a_k(n) = (\lambda - \lambda_1(n)) \dots (\lambda - \lambda_k(n))$ $\lim_{n\to\infty}\lambda_m(n)=\lambda_m.$ Then every solution of (1) has the form Card 1/2

On the Asymptotic Behavior of the Solutions of Difference SOV/20-121-1-6 55

 $y(n) = C_1 y_1(n) + \dots + C_k y_k(n),$ where $y_m(n) \wedge \lambda_m^{-1}(1) \dots \lambda_m^{-1}(n), \quad n \to \infty.$

An analogous result holds for systems of difference equations. In both cases a generalization to the case, where the $\lambda_m(n)$

tend to ∞ or 0, is possible. Further analogous results relate to systems of infinite order and to certain integral equations and differential equations. Altogether there are seven theorems. There are 6 Soviet references.

PRESENTED: February 10, 1958, by M.V.Keldysh, Academician

SUBMITTED: February 8, 1958

1. Mathematics

Card 2/2

AUTHOR:

Yevgrafov, M.A.

SOV/20-121-3-3/47

TITLE:

On the Asymptotic Behavior of the Solutions of Linear Systems of Equations (Ob asimptoticheskom povedenii resheniy sistem lineynykh uravneniy)

PERIODICAL:

Doklady Akademii nauk SSSR,1958,Vol 121,Nr 3,pp 407-410 (USSR)

ABSTRACT:

Let the functions

$$P_n(z) = \sum_{m=-n+1}^{\infty} a_m^{(n)} z^m$$
, $0 < |z| < d_n$, $n = 1, 2, ...$

satisfy the following conditions : 1. There exist sequences g_n and R_n , $g_n < R_n$, so that

$$\lim_{n\to\infty}\max_{|z|=1}\left|\frac{\frac{P_{n+1}\left(\frac{z}{R_{n+1}}\right)}{P_{n}\left(\frac{z}{R_{n}}\right)}\right|=\lim_{n\to\infty}\max_{|z|=1}\left|\frac{\frac{P_{n+1}\left(\frac{z}{S_{n+1}}\right)}{P_{n}\left(\frac{z}{S_{n}}\right)}\right|=1$$

It exists an r_n , $q_n < r_n < R_n$, so that $P_n(z) \neq 0$ for $|z| = r_n$ and that the variation of arg $P_n(z)$ on $|z| = r_n$ is equal

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CIA-RDP86-00513R001963010009-2"

Determination of the Class of Convergence in Certain Interpolation 20-1-7/54 Problems.

> E with regard to z is uniform. In this connection certain restrictions of increase and very strong restrictions of smoothness are imposed to the sequence λ_n . These conditions are given here. With the aid of some lemmata given here the author obtains the following final result: The function defined by the equations $\lim_{n\to\infty} ((v_{n+1}(z)/v_n(z)) = v(z) \text{ and } v(z) = u(\xi(z)) \exp\left(\frac{1}{e}\varphi(\xi(z))\right)$ is regular and one-leaved in the star-like domain K < E, which is depicted on a circle by the function w = v(z). When the integer function F(z) can be represented in the form

 $F(z) = \frac{1}{2\pi i} \int_{C} \Phi(zf) f(f) df$ (where f(f) outside K is regular and where the contour C contains all singular points of f(f)) $F(z) = \sum_{n=0}^{\infty} L_n(F) P_n(z) \text{ applies. There are 5 Slavic references.}$

ASSOCIATION: Department for applied mathematics of the Mathematical Institute imeni V.A. Steklov AN USSR (Otdeleniye prikladnoy matematiki Matematicheskogo instituta imeni V.A.Steklova Akademii nauk SSSR)

PRESENTED:

January 18, 1957 by M.V.Keldysh, Academician

SUBMITTED:

January 17, 1957 Library of Congress

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> CIA-RDP86-00513R001963010009-2" APPROVED FOR RELEASE: 09/17/2001

On the Asymptotic Pensylor of the Solutions of Linear SOV/20-121-3-3/47 Systems of Equations

to zero. 3. For sufficiently large n $P_n(z)$ has in $r_n \leqslant |z| \leqslant R_n$ exactly k_1 zeros $\lambda_{-1}^{(n)}, \ldots, \lambda_{-k_1}^{(n)}$ and in $\beta_n \leqslant |z| \leqslant r_n$ exactly k_2 zeros $\lambda_1^{(n)}, \ldots, \lambda_{k_2}^{(n)}$, where $\lambda_1 \neq \lambda_j$ for $i \neq j$.

4. Let denote $P_{n,m}(z) = \frac{P_n(z)}{z - \lambda_m^{(n)}}$. Then let be

 $\lim_{n\to\infty} \frac{P_{n+1,i}\left(\lambda_{i}^{(n)}\right)}{P_{n+1,i}\left(\lambda_{i}^{(n+1)}\right)} = i \sum_{n=1}^{\infty} \left| \beta_{i,j}(n+1) - \beta_{i,j}(n) \right| < \infty$

$$\sum_{n=1}^{\infty} |\chi_{i,j}(n)| < \infty \qquad i \neq j$$

where

Card 2/4

SOV/20-121-3-3/47 On the Asymptotic Behavior of the Solutions of Linear Systems of Equations

$$\beta_{i,j}(n) = \frac{P_{n+1,j}\left(\lambda_{j}^{(n)}\right)}{\lambda_{j}^{(n)}P_{n+1,j}\left(\lambda_{j}^{(n)}\right)}, \quad \chi_{i,j}(n) = \lambda_{j}(n)\beta_{i,j}(n) \beta_{j,i}(n)$$

Let A denote the matrix $(\omega_{ij})_{1}^{\infty}$, $\omega_{ij} = a_{i-j}^{(i)}$ and

$$Y = \left\{y_1, y_2, \dots\right\} \text{ the solution of the system}$$

$$(1) \quad AY = F \quad , \quad F = \left\{f_1, f_2, \dots\right\} \quad , \quad f_n = 0 \quad , \quad n > n_1$$

(1) is assumed to possess a solution for each F of the above type. Then it holds the following theorem.

Theorem: An arbitrary solution of (1) satisfying the condition

 $y_n = 0((1-\xi)^n R_1 \cdots R_n)$ (where $\xi > 0$ may be arbitrarily small) has the form

 $y_n = c_{-1} y_{-1,n} + \cdots + c_{-k_1} y_{-k_1,n} + b_1 y_{1,n} + \cdots + b_{k_2} y_{k_2,n} + \cdots$ + $0((1+\xi)^n g_1 \cdots g_n)$

Card 3/4

On the Asymptotic Behavior of the Solutions of Linear SOV/20-121-3-3/47

where C₁,..., C_k are arbitrary constants and b₁,...,b_k are constants depending on F and

$$y_{m,n} \sim \mu_{m}^{(1)} \mu_{m}^{(2)} \cdots \mu_{m}^{(n)}, \mu_{m}^{(n)} = \lambda_{m}^{(n)} \frac{P_{n+1,m} \left(\lambda_{m}^{(n)}\right)}{P_{n+1,m} \left(\lambda_{m}^{n+1}\right)}$$

Before this fundamental theorem the author gives statements on two similar but simpler cases. Finally he formulates a continuous analogue of the theorem with respect to integral equations.

PRESENTED:

March 19,1958, by M.V. Keldysh, Academician March 15,1958

Card 4/4

KHUA LO-KEH [Hua Lo-kông]; YEVGRAFOV, M.A. [translator]; GRAYEV, M.I., red.; SHIROKOV, F.V., red.; REZOUKHOVA, A.G., tekhn.red.

[Harmonic analysis of functions of several complex variables in classical domains] Garmonicheskii analiz funktsii mnogikh kompleksnykh peremennykh v klassicheskikh oblastiakh. Pod red.

M.I. Graeva. Moskva, Izd-vo inostr.lit-ry. 1959. 163 p. Translated from the Chinese.

(MIRA 13:4)

(Functions of complex variables)

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16(1) SOV/20-126-3-5/69 Yevgrafov, M.A. AUTHOR: On Theorems Analogous to Phragmen-Lindelöf's Theorem TITLE: PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 3, pp 478-481 (USSR) Let the operator $A(x,\lambda) = \sum_{k=0}^{n} A_k(x) n^k$, $0 \le x < \infty$, in the metric ABSTRACT: space H satisfy the conditions 1) For all $x \ge 0$ and all h of $\infty \in \mathbb{R} \in \mathcal{A} \subset \beta$ (an exception of finitely many $h_1(x), \dots, h_m(x)$ is admitted) let exist a bounded $h^{-1}(x, h)$. The subspaces $\mathbb{E}_{g}(x)$ which are annihilated by $A(x, \lambda_{g}(x))$ are finite-dimensional and the projection of $A(x, \lambda_g(x))$ into $H/H_g(x)$ has a bounded inverse operator. 2) There exist $\lim_{x \to \infty} \lambda_s(x) = \lambda_s$ and in the direct sum of the $H_s(x)$ a base $\varphi_{\rm sp}(x)$ can be chosen so that $\lim_{x\to\infty} \varphi_{\rm sp}(x) = \varphi_{\rm sp}$; $\lim_{x\to\infty} A(x, h_{\rm s}(x)) \varphi_{\rm sp}(x) = h_{\rm s} \varphi_{\rm sp}$, where the $\varphi_{\rm sp}$ are linearly independent. Card 1/3

On Theorems Analogous to Phragmen-Lindelöf's Theorem SOV/20-126-3-5/f')

3) $A^{-1}(x, h)A(t, h)$, $0 \le t < \infty$ is bounded for $h \ne h_g(x)$ and $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty} \frac{1}{|x-t|} \|A^{-1}(x, h)A(t, h) - E\| = 0$ $\lim_{x \to \infty}$

On Theorems Analogous to Phragmen-Lindelöf's Theorem SOV/20-126-3-5/69
Under a further assumption, in theorem 2 the formula

$$u_{sp}(x) = (\varphi_{sp} + \varepsilon_{sp}(x)) \exp \left[\int_{0}^{x} \lambda_{s}(t) dt\right], \quad \|\varepsilon_{sp}(x)\| \to 0, \quad x\to\infty$$

is given.

Two further theorems contain concrete applications of the first two theorems.

The first theorems generalize results of Ye.M.Landis and P.Lax. There are 6 references, 5 of which are Soviet, and 1 American.

PRESENTED: February 17, 1959, by M.V.Keldysh, Academician

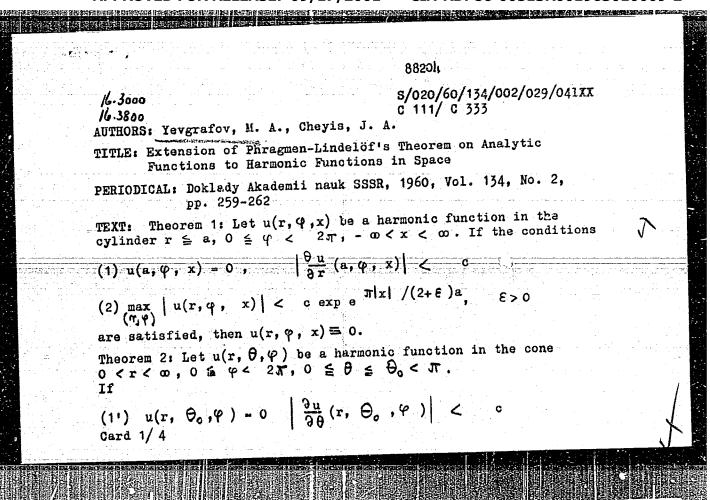
SUBMITTED: February 16, 1959

Card 3/3

LIDSKIY, Viktor Borisovich; OVSYANNIKOV, Lev Vasil'yevich; TULAYKOV,
Anatoliy Nikoleyevich; SHABUNIN, Mikhail Ivanovich. Prinicali
uchastiye: ABRAMOV, A.A.; BOCHEK, I.A.; YEVGRAFOV, M.A.; ZYEOV,
A.A.; KARABEGOV, V.I.; KARIMOVA, Eh.Eh.; KUURYAVTSEV, L.D.;
KUTASOV, A.D.; SHURA-BURA, M.R.; SHCHEGLOV, M.P. SOLODKOV,
V.A., red.; KRYUCHKOVA, V.N., tekhn.red.

[Problems in elementary mathematics] Zadachi po elementarnoi matematike. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1960. 463 p. (HIRA 14:1)

(Mathemetics--Problems, exercises, etc.)



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S/020/60/134/002/029/041XX C 111/ C 333

Extension of Phragmen-Lindelöf's Theorem on Analytic Functions to Harmonic Functions in Space

(2') $\max_{(\theta, \varphi)} |u(r, \theta, \varphi)| \le c \exp_{(r + \frac{1}{r})} |\pi_{2\theta_0}| = 0$, $\epsilon > 0$ are satisfied, then $u(r, \theta, \varphi) \equiv 0$.

The proofs are based on: Theorem 3: Let $F(z) = \sum_{n=1}^{\infty} a_n e^{-n\pi}$ be an entire function and

(3) $|a_n|^{1/n} < \frac{c}{n^{2+\epsilon}}$, $\epsilon > 0$

(4) $\lim_{n\to\infty} \frac{n}{\lambda_n} = \alpha$, $0 < \alpha < \infty$. $\lambda_n > 0$ If there |F(x)| < c, $-\infty < x < \infty$, then $F(z) \equiv 0$. The proof of theorem 3 is based on:

Lemma 1: If $-\delta|t|$ (6) |F(t)| < c = 0, $-\infty < t < \infty$, $0 < \delta < S$, Card 2/4

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S/020/60/134/002/029/041XX C 111/ C 333

Extension of Phragmen-Lindelöf's Theorem on Analytic Functions to Harmonic Functions in Space

then
$$F_g(x + iy)$$
 is regular in

(7) - $\infty \langle x < \infty . | y | \leq \pi/2$ - $\eta > 0$

and satisfies there the inequality

(8)
$$|F_{\xi}(x+iy)| < ce^{-\delta|x|}$$

(8) $|f_{\xi}(x+iy)| < ce^{-\delta|x|}$ Lemma 2: If $f(z) = \sum_{n=1}^{\infty} a_n e^{-\lambda_n z}$ is an entire function, and if (3), (4) are satisfied, while $g > 1/(2+\varepsilon) \infty$, then

(3), (4) are satisfied, while
$$\frac{\lambda_n}{s} = \frac{\lambda_n z}{s}$$

(9) $\frac{\lambda_n}{s} = \frac{\lambda_n z}{s} = \frac{\lambda_n z}{s}$

Lemma 3: Let $f(t+i\lambda)$ be regular in $|\lambda| \le \gamma$, $-\infty <$ and assume that it satisfies there the inequality

and assume that it satisfies there the inequality
$$|f(t+i\lambda)| < ce^{-\delta |t|}$$
. Then for the function

$$\varphi(z) = \int_{-\infty}^{\infty} f(t) e^{-tz} dt$$
 regular in $|\text{Re } z| < \delta$ it holds the Card $3/4$

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Extension of Phragmen-Lindelöf's Theorem on Analytic Functions to Harmonic Functions in Space

estimation $|\varphi(iy)| < ce$

Lemma 4: Let denote

(10)
$$G_{g}(z) = \int_{z=1}^{\infty} (1 - \frac{z^{2}}{\lambda_{n}^{2}}) \int_{z=\infty}^{\infty} F_{g}(t) e^{-tz} dt, \quad 2 > \frac{1}{(2+\varepsilon)}$$

The function $G_{\epsilon}(z)$ is analytically continuable into the semiplane $\text{Re }z \geq 0$ and satisfies there the inequalities

(11)
$$|G_{\varsigma}(iy)| < c e^{\pi |y|} (\propto -\frac{1}{2\varsigma} + \varepsilon_{\varsigma})$$
 ($\varepsilon_{\varsigma} > 0$ arbitrary)

S. N. Mergel'yan is mentioned in the paper. There are 4 references: 2 Soviet, 1 English and 1 American.

PRESENTED: May 3, 1960, by M. V. Keldysh, Academician

SUBMITTED: April 28, 1960

Card 4/4

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S/020/60/134/003/021/033XX C 111/ C 333

AUTHORS: Arshon, J. S., Yevgrafov, M. A.

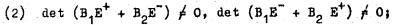
TITLE: Evaluation of the Growth of a Solution to a System Defined by Heterogeneous Conditions at the Boundary and Phragmen-Lindelöf's Theorems

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 3, pp. 507-510

TEXT: Let the system

(1) $\frac{\partial u}{\partial y} = A \frac{\partial u}{\partial x} + Pu$, $B_1 u(x,0) + B_2 u(x,1) = f(x)$,

be given, where A, P, B, B are matrices of order n and u and f are vectors. 1.) The matrix A is assumed to possess no purely real eigenvalues; 2.) let E and E be projection operators onto the sum of the invariant subspaces of A which correspond to the eigen-values a for which Im a > 0 or Im a < 0; here let



3.) let

Card 1/4

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Evaluation of the Growth of a Solution to a System Defined by Heterogeneous Conditions at the Boundary and Phragmen-Lindelöf's Theorems

Theorems

(4)
$$\|f(x) - f(s)\| < |x - s|^{\alpha} (\varphi(x) + \varphi(s)), \quad \alpha > 0$$

where

$$\varphi(x) > 0$$
, $\lim_{x \to +\infty} \frac{\varphi(x)}{\varphi(x)} = 0$.

Theorem 1: If det $(B_1 + B_2 e^{P+zA})$ possesses no purely imaginary zeros, then there exists a solution $u_0(x,y)$ of

(1) for which
$$u_0(x,y) = 0(\varphi(x) + ||f(x)||)$$

Theorem 2: If p is the greatest multiplicity of the purely imaginary zeros of $\det (B_1 + B_2 e^{P+zA})$

then there exists a solution of

(1) for which
$$u_o(x,y) = 0(\varphi(x) + ||f(x)|| + x^{P-1} \int_0^x ||f(t)|| dt$$

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Evaluation of the Growth of a Solution to a System Defined by Heterogeneous Conditions at the Boundary and Phragmen-Lindelöf's Theorems

Theorem 3: If det $(B_1 + B_2 e^{P+zA})$ possesses a simple zero $z = i \lambda_0$, then (1) has a solution

$$u_o(x,y) = e^{Py + i h_o(x+Ay)} G_o \int_0^x e^{-i h_o t} f(t) dt + O(\phi(x) + ||f(x)||)$$

where G is a certain constant matrix of rank 1.

By connecting the theorems 1-3 with the results of (1) the author obtains Phragmen-Lindelöf theorems for (1), e. g.

Theorem 4: If det $(B_1 + B_2 e^{P+zA})$ has no zeros in $0 \le Re \ z < \beta$ and if u(x,y) is a solution of (1) satisfying the condition

$$u(x,y) = o(e^{\beta x}) ; x \rightarrow \infty$$

then it is $u(x,y) = O(|\varphi(x)| + ||f(x)||)$.

The proof of the theorems 1-3 is based on the estimation of Card 3/4



APPROVED FOR RELEASE: 09/17/2001

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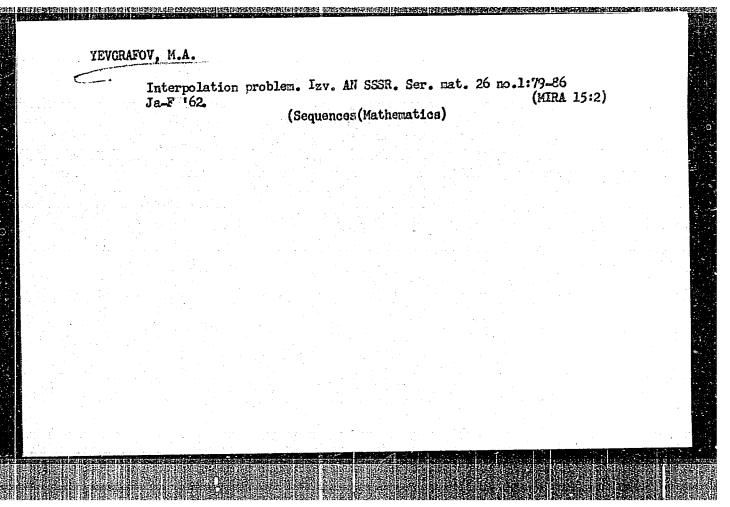
Evaluation of the Growth of a Solution to a System Defined by Heterogeneous Conditions at the Boundary and Phragmen-Lindelöf's

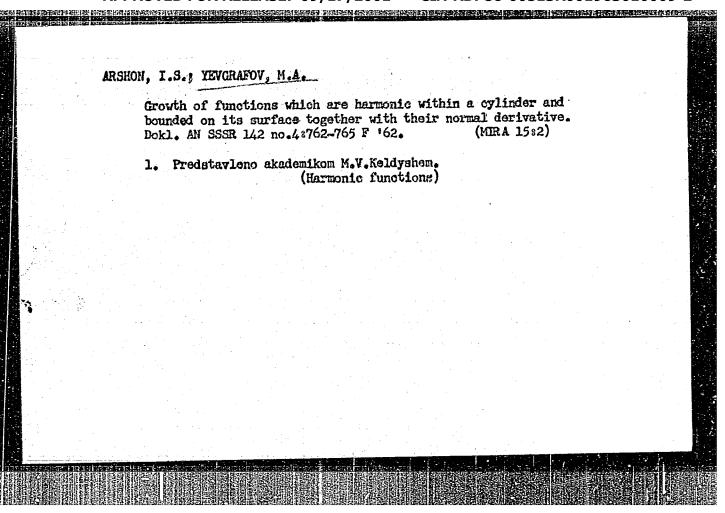
M(z,y) and K(x,y), where $M(z,y) = e^{(P+zA)y}(B_1+B_2e^{P+zA})^{-1}$, K(x,y) is a certain curve integral of M(z,y) e^{zx} , as well as on the consideration of the residuum of M(z,y) e^{zx} in the pole $z = z_n$. There is 1 Soviet reference.

PRESENTED: May 3, 1960, by M. V. Keldysh, Academician SUBMITTED: April 28, 1960

Card 4/4

ng manana Sala





ARSHON, I.S.: YEVGRAFOV, M.A. Instance of a function which is bounded cutside a circular cylinder and is harmonic everywhere in space. Dokl. AN SSSR 1/3 no.1:9-10 Mr 162. (MIRA 15:2)

> 1. Predstavleno akademikom M.V.Keldyshem. (Harmonic functions)

143 no.1:9-10 Mr 162.

YEVGRAPOV, Marat Andreyevich; KOFYLOVA, A.N., red.; PLAKSHE, L.Yu., tekhn. md.

[Asymptotic estimations and integral functions]Asimptoticheskis otsenkii tselys funktsii. lzd.2., peror. Moskvp, Fizmatgiz, 1962. 199 p. (MIRA 25:10)

(Functions, Entire)

PHASE I BOOK EXPLOITATION

SOV/6263

Yevgrafov, Marat Andreyevich

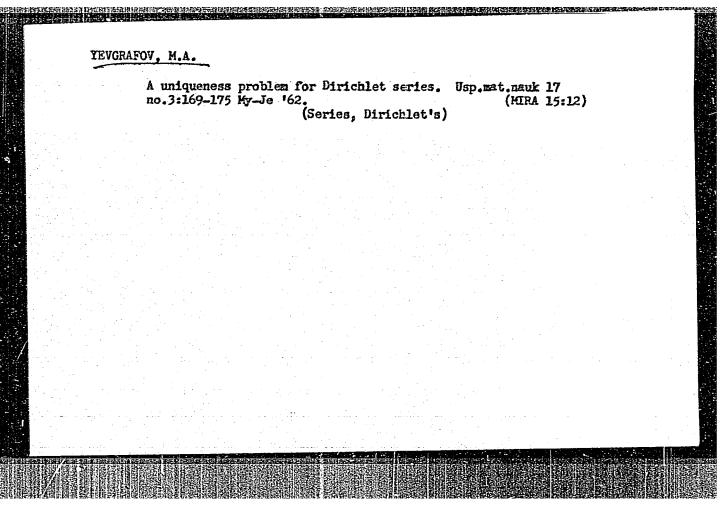
Asimptoticheskiye otsenki i tselyye funktsii (Asymptotic Estimates and Entire Functions). 2d ed., rev. Moscow, Fizmatgiz, 1962. 200 p. 8000 copies printed.

Ed.: A. N. Kopylova; Tech. Ed.: L. Yu. Plakshe.

PURPOSE: This book is intended primarily for mathematicians engaged in the study of entire functions, as well as for scientific personnel of other related sciences.

COVERAGE: General laws and fundamentals of the theory of entire functions are presented. Methods used for obtaining the asymptotic estimates are described. Estimates of some particular classes of entire functions are derived. The author thanks Ye. B. Vul and I. S. Arshon for reading the manuscript. Some references are mentioned in the text, but there are no references at the end of the book.

Card 1/

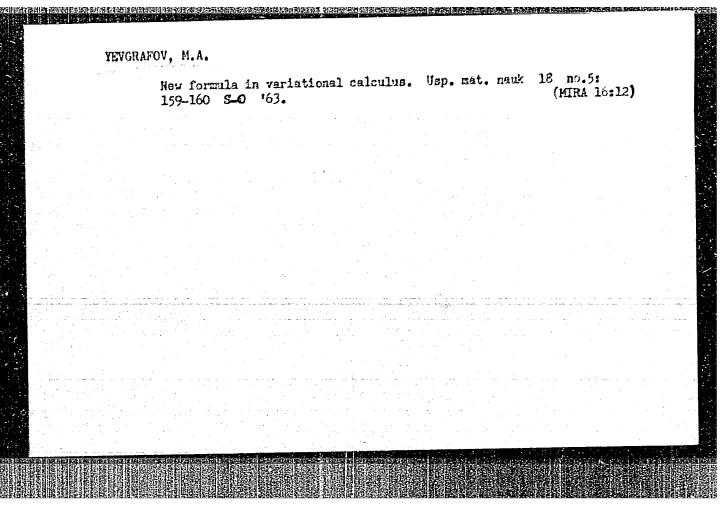


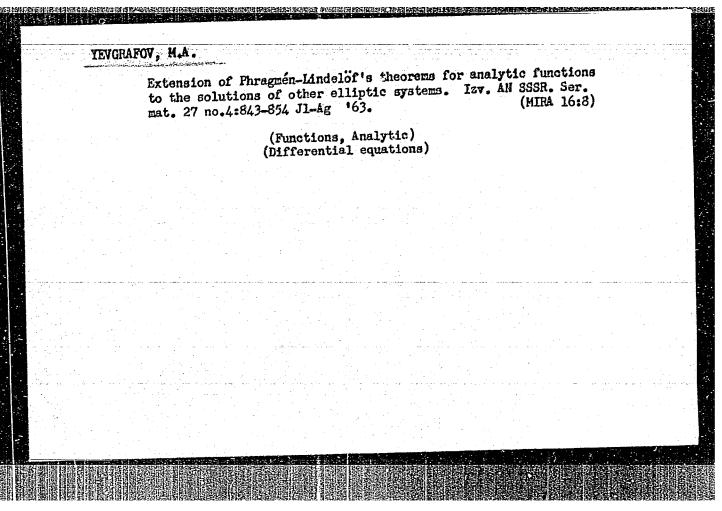
ARSHON, I. 9.; IEVGRAFOV, M. A.

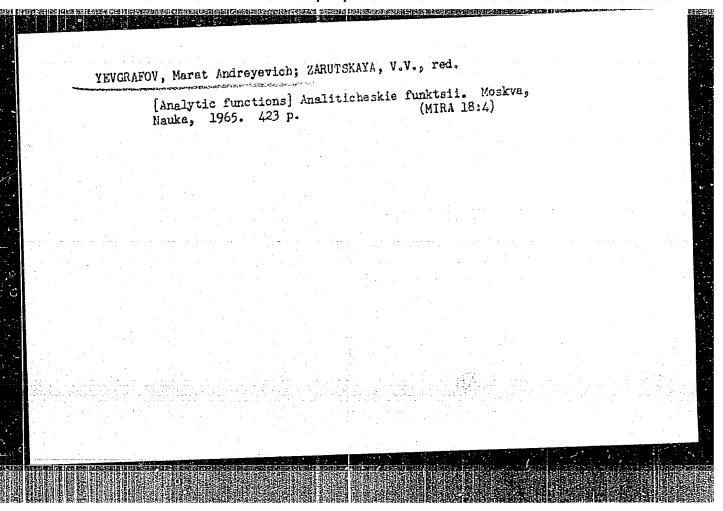
On the growth of harmonic functions of three variables. Dokl.
AN SSSR 147 no.4:755-757 D '62. (MIRA 16:1)

1. Predatavleno akademikom M. V. Kaldyshem.

(Harmonic functions)

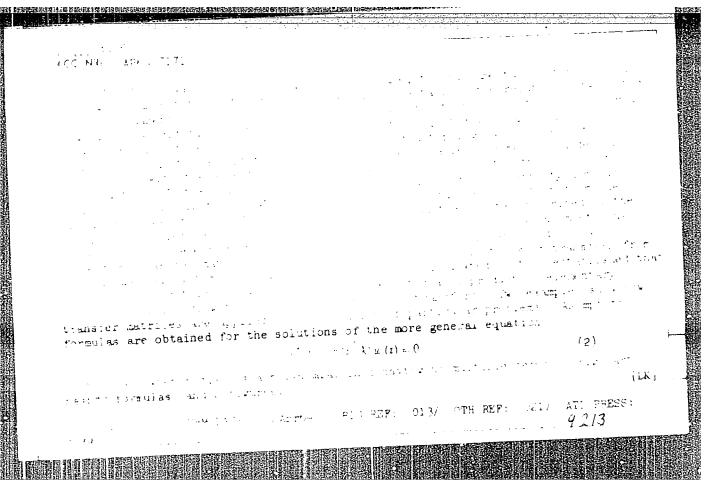






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n in the matematic tenth of the con-	
) and of known grymmtotic solutions of
	entire function in a complex plane 2. The
main problem considered consists in deriv	the domain of the z plane, in which the
: lution is known, into the entire - pre-	Alantania problem

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And the second second	(ORG: none PITLE: The asymptotic properties of the resolvent of an integral equation with a properties of the differences between variables	
		kernel which is a function only	
	.	TOPIC TAGS: Euclidean space, asymptotic property, integral equation, vector function, Fourier transform, orthogonal function ABSTRACT: The integral equation	
		where P and Q are vectors and $d\sigma$ is the volume element of space R, is examined. D is where P and Q are vectors and $d\sigma$ is the volume element of space R, is examined. D is	
		$(\Gamma_{\varrho}^{(1)}(P,P;\lambda)\leqslant \Gamma^{(1)}(0;\lambda)=(20)$	-
	Electronic and the	and when $P \to +\infty$ at fixed $\frac{\lambda}{2} \neq 0$, $\int_{0}^{\infty} \frac{\Gamma_{0}^{(1)}(P, P; \lambda) d\sigma_{P}}{(2\pi)^{n}} \frac{\nu(D_{0})}{(2\pi)^{n}} \int_{R}^{\infty} \frac{\alpha^{n}(S)}{1 + \lambda \alpha(S)} d\sigma_{S}$ UDC: 517.4+517.5+517.9	

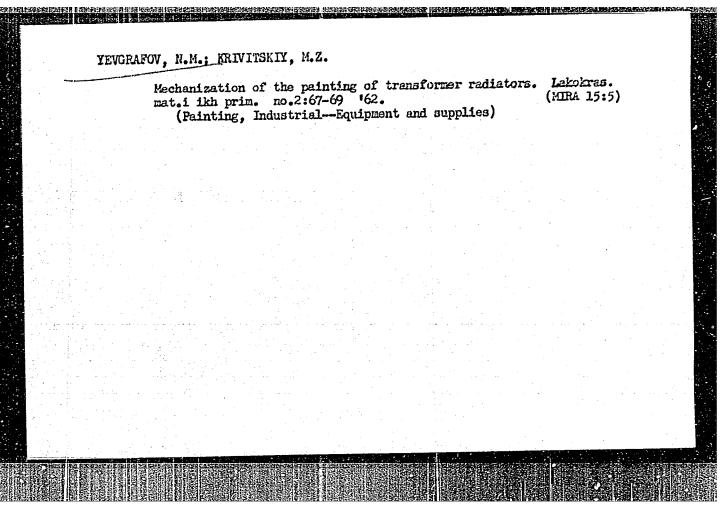
		L 40054-66
		ACC NR: AP6015600
		$(V(DP))$ is the volume of domain $D^{(Q)}$. If $\psi_{\tau}(P,Q;\lambda)$; is the resolvent of the original integral equation and
		original integral equation $\psi_{\mathbf{v}}(P,Q;\lambda) = \frac{1}{\lambda} \{ P-Q - \mathbf{v} - \psi_{\mathbf{v}}(P,Q;\lambda)\}; N_{\mathbf{v}}(t);$
		the the the segment (-t, 0), then
	1	is the number of eigenvalues of the equation that lie on the segment (-t, 0), then
		the following asymptotic formulas are
		$\int_{\mathcal{D}} \psi_{Y}^{(2)}(P, P; \lambda) d\sigma_{P} \sim$
		$\frac{\pi}{\sqrt{(n-\gamma)\sin n\gamma/(n-\gamma)}} 2^{-\gamma} \pi^{-\alpha/n} \frac{(\Gamma(n-\gamma)/2)}{\Gamma(\gamma/2)} \Omega_n \lambda^{\gamma/(n-\gamma)-1} V(D) (\lambda \to +\infty),$
		$\frac{1}{(n-r)(n-r)} = \frac{1}{(n-r)(n-r)}$
	į	$\frac{\Gamma(n-\tau)\sin \pi \gamma/(n-\tau)}{N_{\gamma}(t) - \frac{1}{n} \cdot 2^{-\tau} \pi^{-\frac{1}{2}} \frac{\Gamma((n-\tau)/2)}{\Gamma(\gamma/2)} \Omega_{nt} \eta/(n-\tau) \gamma(D)}{\Gamma(\gamma/2)} (t \to +\infty) ,$
		chare in R. This paper was presented by Academician
		where Ω_n is the area of a unit sphere in R. M. V. Keldysh on 31 August 1965. Orig. art. has: 39 formulas.
		M. V. ACIOYSI OIL J. AMB.
		SUB CODE: 12/ SUBM DATE: 17Aug65/ ORIG REF: CO1
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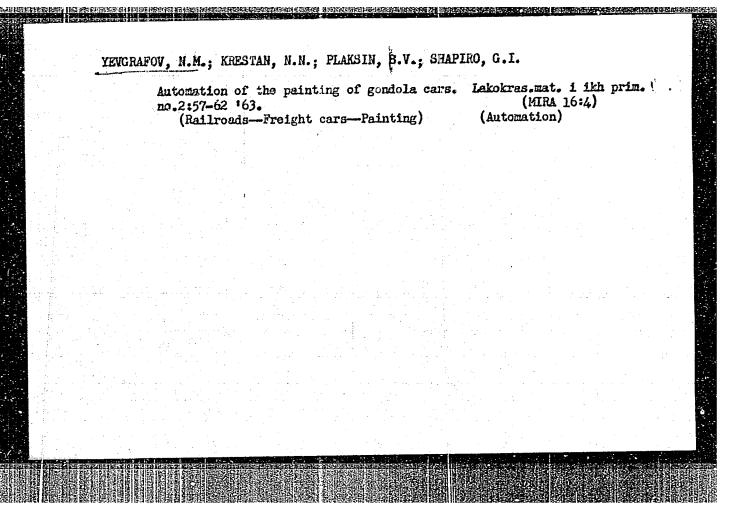
KOLGANOV, V.I.; SURGUCHEV, M.L.; YEVGRAFOV, N.A.

Results of the study of oil recovery from layer B2 of the Zol'nyy Gyrag field by zonal water encroachment; water encroachment ibuchrons. Geol. nefti i gaza 9 no.4:14-19 Ap '65.

(MIRA 18:8)

1. Gosudarstvennyv institut po proyektirovaniyu i issledovatel'skim rabota neftedobyvayushchey promyshlennosti vostochnykh rayonov strany, nuybyshev.



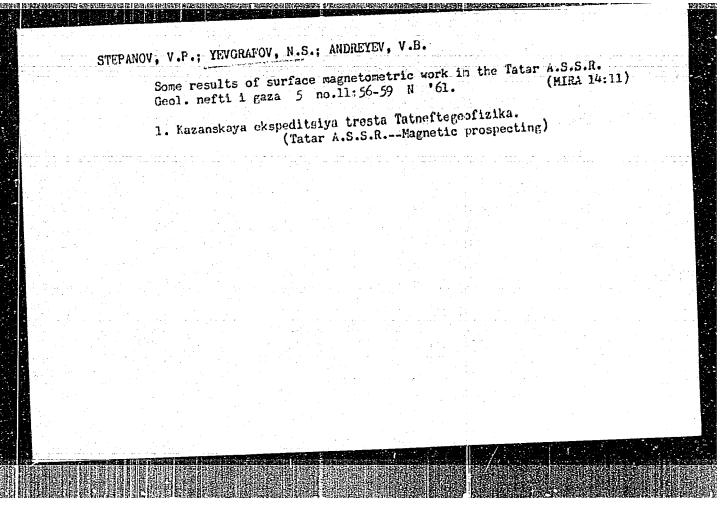


YEVGRAFOV, N.M.; MORDUKHOVICH, G.A.

EET electric heater used in drying lacquer and paint coatings. Lakokras. mat. i ikh. prim. no.4:49-53 '61. (MIRA 16:7)

1. Proyektnoye byuro Gosudarstvennoy vsesoyuznoy proizvodstvennoy kontory po lakokrasocinym pokrytiyam Glavkhimplastkraski Ministerstva khimicheskoy promyshlennosti SSSR.

(Protective coatings—Drying)



APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R001963010009-2"

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AUTHORS:

Stepanov, V. P., Yevgrafov, N. S. and Andreyev, V. B.

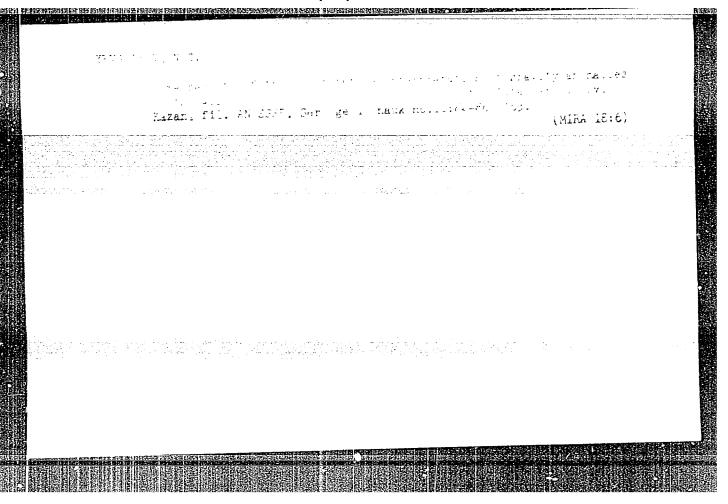
Some results of ground magnetometer operations on the

territory of Tatariya

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 5, 1962, 32, abstract 5A254 (Geol. nefti i gaza, no. 11, 1961,56-59)

TEXT: The results of magnetometer investigations in south- and north-easterly districts of the Tatar ASSR and in adjoining regions are described. The aim was to detail previously exposed anomalies, to interpret them geologically, and to zone them tectoni-cally. A map of the crystalline basement's relief was constructed as a result of both quantitative calculations by the simplest methods and the consideration of drilling data. / Abstracter's note: Complete translation. 7

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Study of the subsurface structure of the northern dome of the							
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TEVERAFOV. V.; AVIESON. Yu.

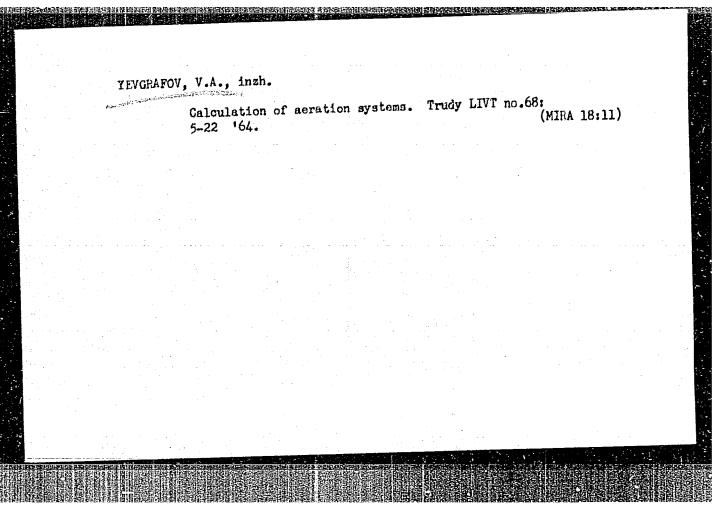
Unit for the chemical cleaning of sheet steel. WTO no.8:27 kg '59.

(KIRA 12:11)

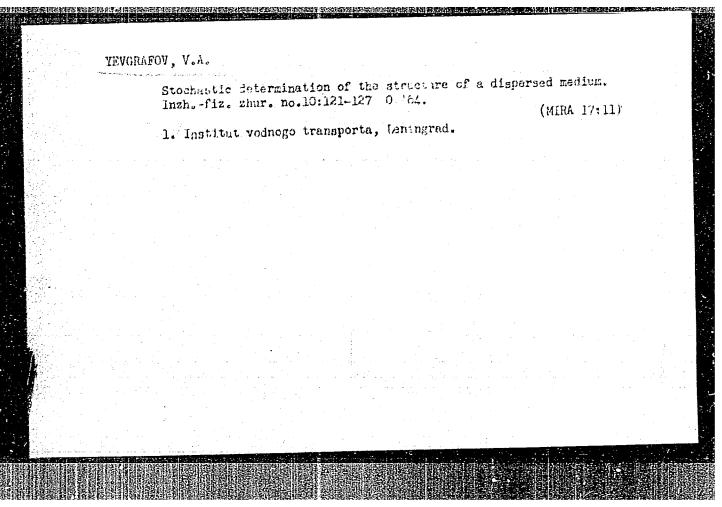
1. Predsedatel' soveta pervichnoy organizatsii Nauchno-tekhnicheskogo obshchestva Leningradskogo sudostroitel'nogo zavoda (for Yevgrafov).

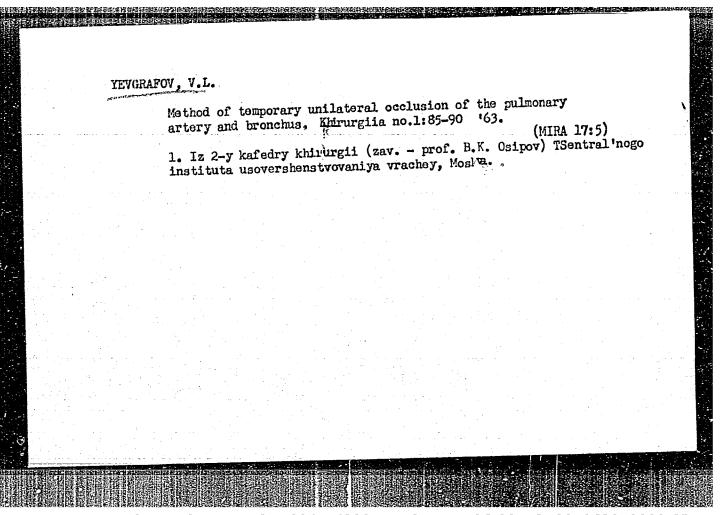
2. Uchemyy sekretar' soveta pervichnoy organizatsii Nauchno-tekhnicheskogo obshchestva Leningradskogo sudostroitel'nogo zavoda (for Avikson).

(Leningrad—Sheet steel)

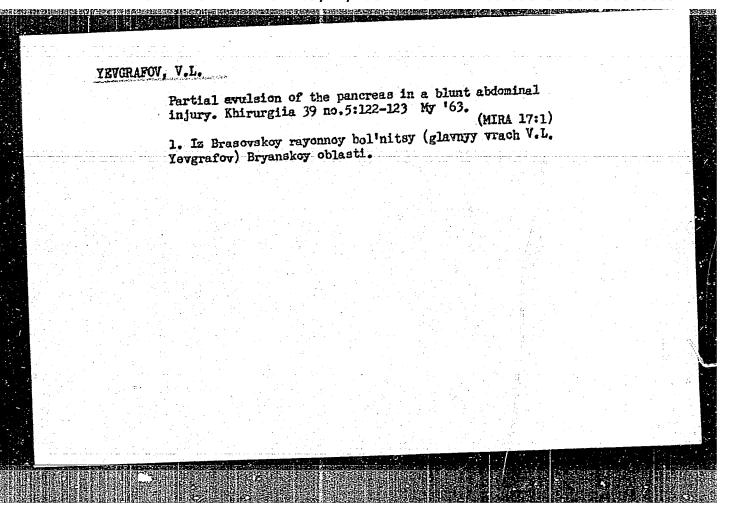


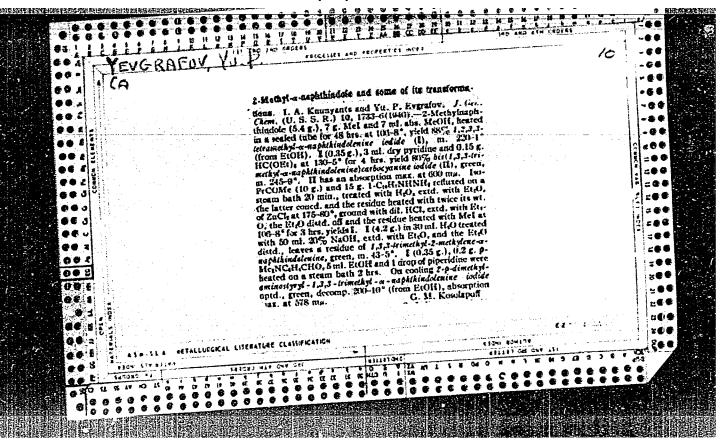
YEVGRAFOV, V.A. Relationship between the airgap and porosity of disperse media. Inzh.-fiz.zhur. 6 no.10:112-114 0 '63. (MIRA 16:11) 1. Institut vodnogo transporta, Leningrad.

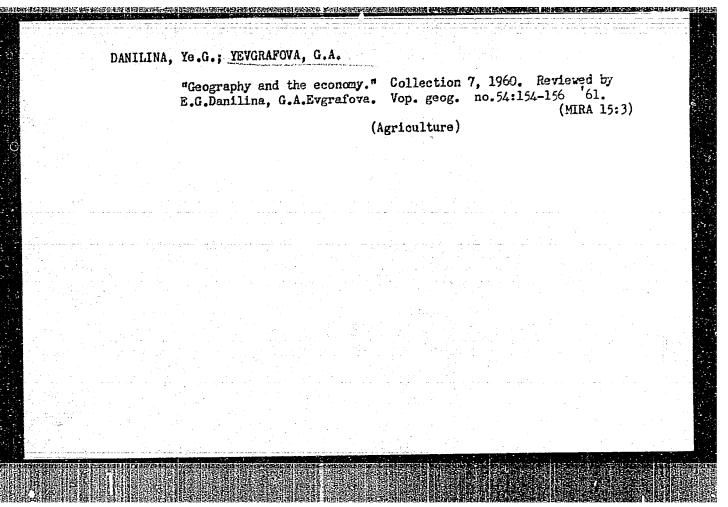




YEVGRAFOV, V.L. Temporary unilateral bronchovascular occlusion in surgery of the lungs. Trudy TSIU 66:97-107 '54. Use of the "sail" phenomenen in conducting the catheter through the chambers of the heart. Ibid.:108-113 (MIRA 18:5)





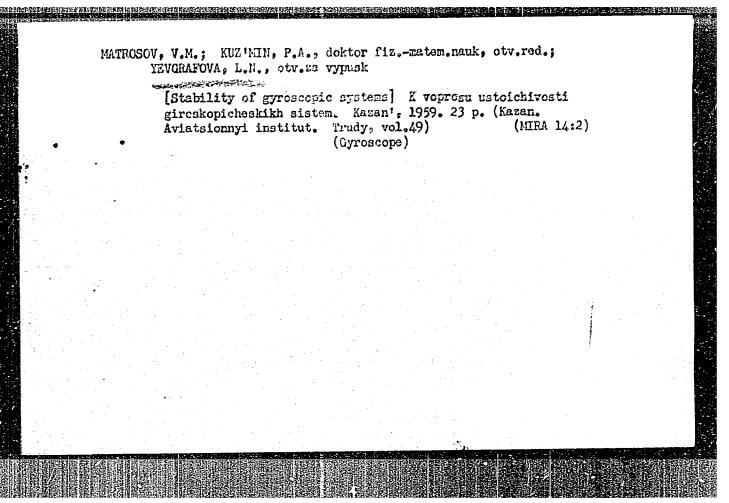


AMINOV, Mangim Shakurovich; KURSHEV, N.V., prof., otv.red.; YEVGRAFOVA,
L.N., otv. za vypusk

[Some problems in the metion and stability of a solid of
variable mass] Nekotorye voprosy dvizhenia i ustoichivosti
tverdogo tela peremennoi massy. Kazani, 1959. 116 p. (Kazan,
Aviatsionnyi institut. Trudy, vol. 48)

(Solids—Dynemics)

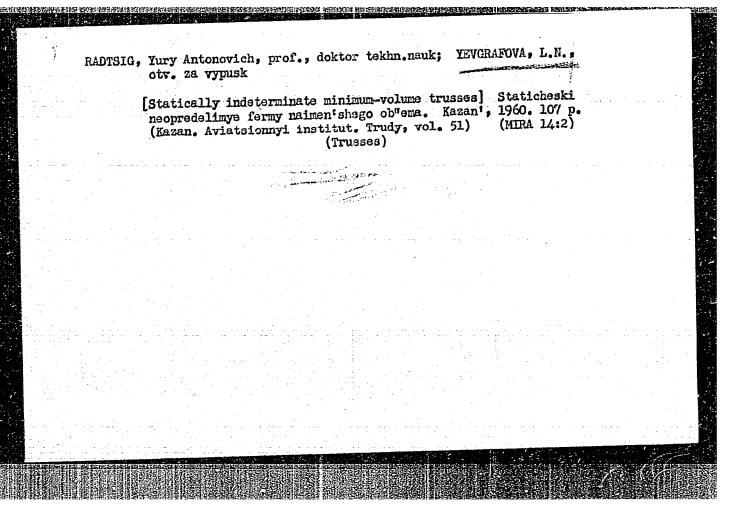
(Solids—Dynemics)



MATVEYEV, G.A.; YEVGRAFOVA, L.N., otv.za vypusk; KURSHEV, N.V., prof.otv.red.; VAKHITOV, M.B., kand.tekhn.nauk, dotsent, red.; GALIULLIN, A.S., doktor, tekhn.nauk, red.; MITRYAYEV, M.I., kand.tekhn.nauk, dotsent, red.; RADTSIG, Yu.A., doktor tekhn.nauk, prof., red.; FEDOROV, A.K., kand.tekhn.nauk, dotsent, red.

[A method for generating tooth surfaces of hyperbolical ge ira]
Odin iz sposobov obrazovanila poverkhnostei zub'ev giperboloidnykh
koles. Kazan' 1960. 23 p. (Kazan. Aviatsionnyi institut.
Trudy, no.60). (MIRA 15:3)

(Gearing, Bevel)



KRYLOV, B.L.; YEVGRAFOVA, L.N., otv. 2a vyp.

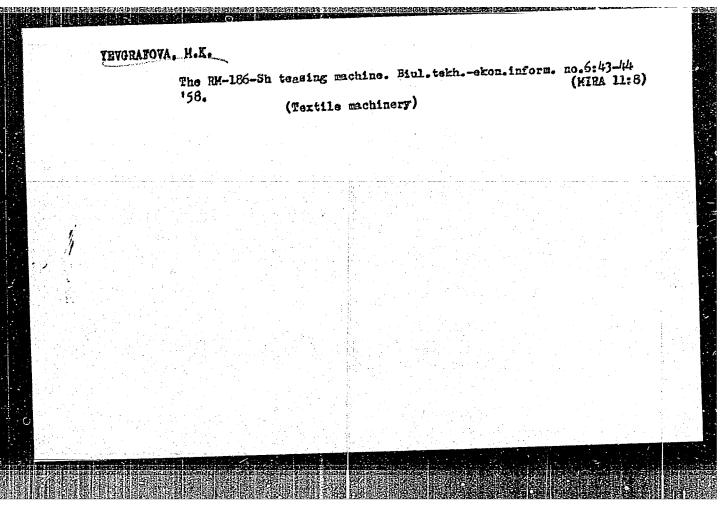
[Fundamentals of operational calculus] Osnovy operatsionnogo ischisleniia; uchebnoe posobie dlia aviatsionnykh
institutov. Izd.2., perer. Kazan', Kazanskii aviatsionnyi in-t, 1961. 50 p.
(Calculus, Operational)

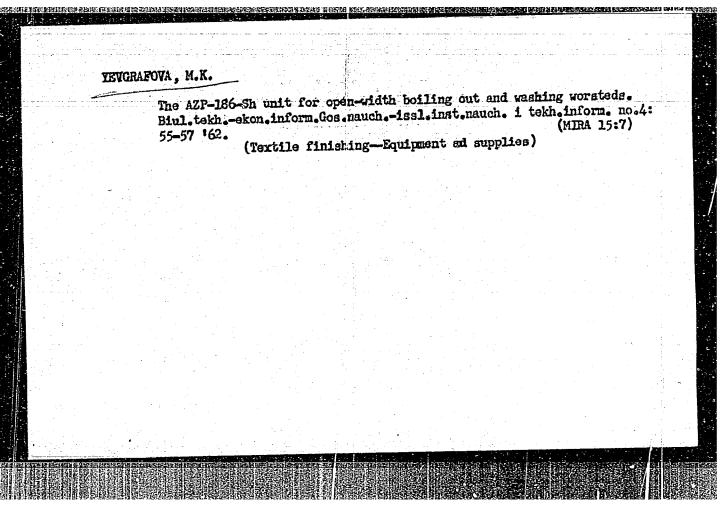
(Calculus, Operational)

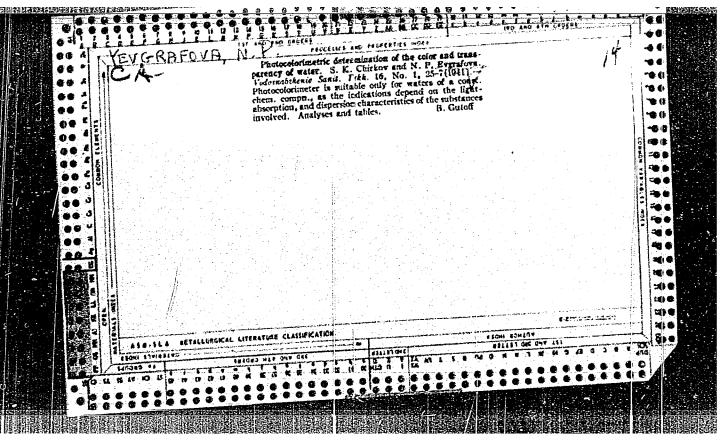
YEVGRAFOVA, M.K., inzh.; IL'YASHEVICH, V.A., inzh.; VOL'NOVA, Z.G., nauchn. red.; EABAKOV, A.N., red.

[Continuous action equipment for the bleaching of cotton cloth and knitted fabrics] Oborudovanie nepreryvnogo deistviia dlia otbelki khlopehatobumazhnoi tkani i trikotazhnogo polotna. Moskva, 1963. 39 p. (Seriia III: Novye mashiny, oborudovanie i sredstva avtomatizatsii, no.67) (MIRA 17:7)

1. Moscow. TSentral'nyy institut nauchno-tekhnicheskey informatsii po avtomatizatsii i mashinostreyeniyu. 2. Vsesoyuznyy nauchno-issledovatel'skiy institut legkogo i tekstil'nogo mashinostroyeniya (for Il'yashevich).



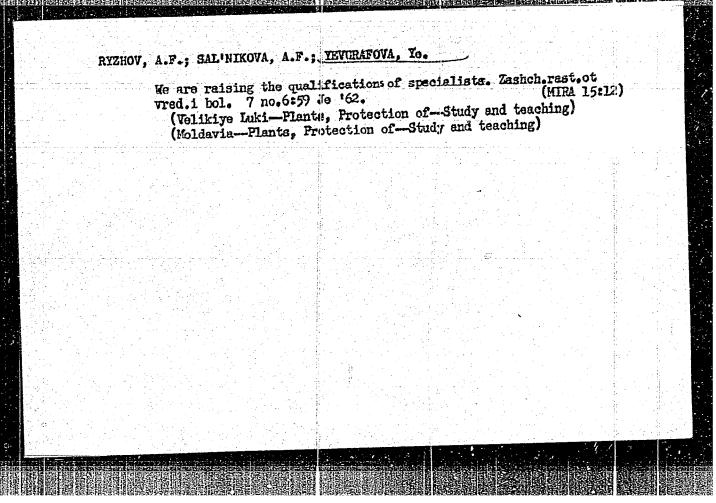


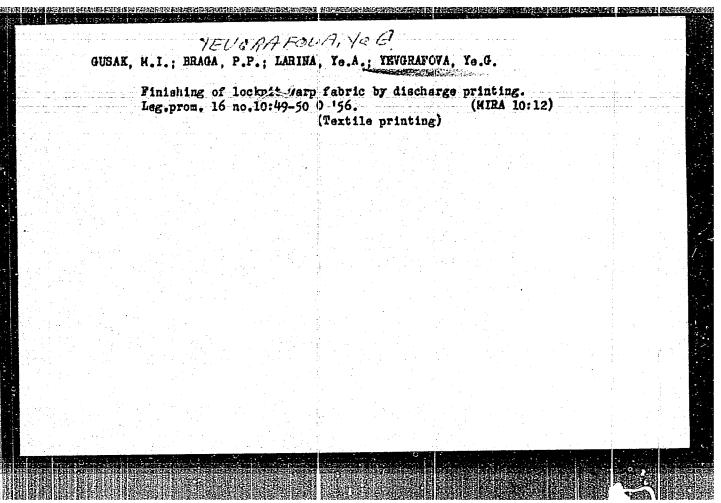


YEVGRAFOVA, N. P.

"Comparative Biochemical Study of the Potato Under Central Asian Conditions in Relation to Selection of the Tubers on the Basis of Their Chemical Composition." Cand Biol Sci, All-Union Inst of Plant Growing, All-Union Order of Lenin Acad Agricultural Sci imeni V. I. Lenin, Leningrad, 1955. (KL, No &, Feb 55)

SO: Sum. No 631, 26 Aug 55-Survey of Scientific and Technical Dessertations Defended at USSR Higher Educational Institutions (14)





VIL'DERMAN, A.M.; FINN, E.R.; NEVCRAFOVA, Z.A.,

Compound treatment of pulmonary tuberculosis with antibacterial preparations in combination with corticosteroid hormones, butadione, blood transfusions and tuberculin. Zdravockhranenie 4, no.3218-22 My-Je'61.

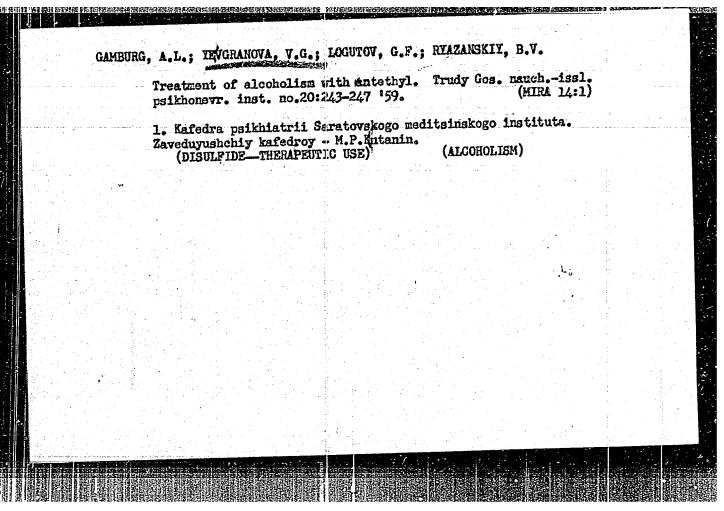
1. Iz Respublikanskogo tuberkuleznogo sanatoriya "Vornichen" Ministerstva zdravockhraneniya Moldavskoy SSR (glavnyy vrach K.A. Draganyuk).

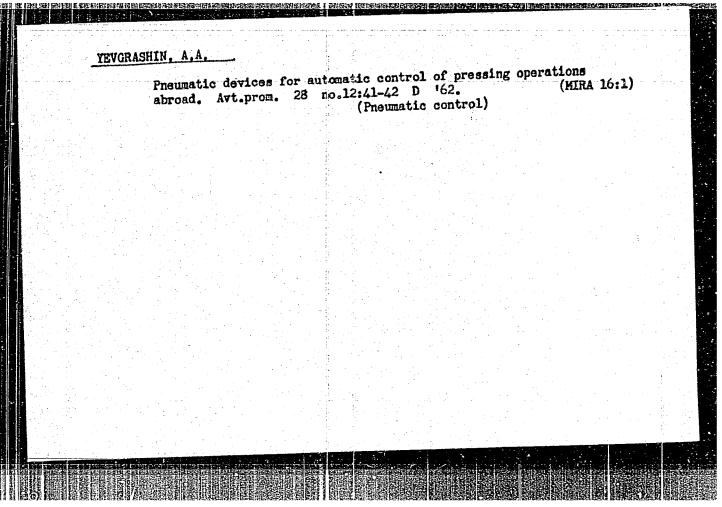
(THEERCULOSIS)

VIL'DERMAN, A.M., kand. med. nauk; YEVGRAFOVA, Z.A.; YEZERSKIY, V.F.

Data on the technic of tuberculin diagnosis. Probl. tub. no.7;
36-41 '63. (MIRA 18:1)

1. Iz Respublikanskogo tuberkuleznogo sanatoriya "Vornicheny"
(glevnyy vrach K.A. Draganyuk) Ministerstva zdravookhraneniya
Moldavskoy SSR.





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SUCHKO, Georgiy Dmitriyevich, inah.; YEVCRASHIN, Konstantin Fedorovich, inzh.; KRFMKOV, Gennadiy Dmitriyevich, inzh.; KUDIKINA, Ye., red.; NIKITINA, V., tekhn. red.

[Trawls and drift nets; a manual for workers of fishing equipment factories and for master fishermen] Traly i drifternye seti; posobie dlia rabochikh fabrik orudii lova, masterov dobychi. Kaliningrad, Kaliningradskoe knizhnoe izd-vo, 1963. 109 p. (MIRA 17:3)

1. Kaliningradskaya fabrika orudiy lova (for Suchko, Yevgrashin, Kremkov).